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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,460	01/18/2002	Norbert Moszner	20959/1661 (P 58792)	3711

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,460

Applicant(s)

MOSZNER ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claims Analysis

Applicant is reminded that the word "dental" is, in the Examiner's estimation, merely a recitation of intended use equivalent to, for example, "a material for preparing dental formulations". Accordingly, it is not assessed patentable weight.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nass et al., U.S. patent # 5,064,877 for the reasons made of record in the correspondence dated September 28, 2004. Concerning claim 14, this claim is rejected because it further limits an aspect of the invention that did not represent the Examiner's grounds for rejection.

Claims 1-7, 10, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by the article entitled "Oxozirconium Methacrylate Clusters $Zr_6(OH)_4O_4(OMc)_{12}$ and $Zr_4O_2(OMc)_{12}$ (OMc = Methacrylate" authored by Schubert et al.. The title compounds represent two of the favored embodiments of Applicant's invention (see page 7 of the Specification). As for claim 10, combination of the cluster compounds with other co-reactive materials is implied by the second paragraph of the

Art Unit: 1712

disclosure. These co-reactive materials can satisfy Applicant's requirement for "further additives".

Response to Arguments

Applicant states that the reference does not teach the claimed cluster because products obtained by (i) reacting the metal ester MR_n and the complexation compound A at a ratio of between 1:0.5 to 1:3 and subsequently (ii) polycondensing the intermediate product formed in step (i) are not encompassed by the claims. In support of the argument, Applicant points to the disclosure at column 6, lines 58 to column 7, lines 1-34 where products derived from these materials are characterized as being "three dimensional networks" ($MR_n:A = 1:1$) or fibers ($MR_n:A = 1:2$). Furthermore, it is emphasized that, whereas the reference reports that at a ratio of 1:4, condensation products cannot be formed, a high excess of chelating ligand to metal alkoxide is used in the preparation of the presently claimed products.

While the Examiner acknowledges that the preferred embodiments of their invention are those derived from a high molar excess, greater than 4:1, of the chelating compound relative to the number of moles of metal oxide, the more broadly disclosed and claimed invention is one where the ratio of chelate-to-metal center may be much smaller. Indeed, the claims even contemplate those "clusters" where the ratio is smaller than one insofar as "f" can be smaller than the sum of "a + b".

As for the characterization by Nass et al. of their products as networks or fibers, they are entitled to be their own lexicographer and the fact that they have elected to identify their products in this fashion does not create a patentable distinction. Indeed,

Art Unit: 1712

the products taught by Nass could also have been aptly labeled "clusters" given that they are structurally and chemically similar.

As for Applicant's observation that the reference says that at a ratio of 1:4, M is fully complexed and is, therefore, incapable of being hydrolyzed or condensed, the Examiner acknowledges that this statement is made by the disclosure. However, the Examiner disputes the premise that the products derived from a 4:1 ratio of A to MR_n are not clusters. There need not be condensation of individual metal molecules to produce a cluster. Indeed, none of the preferred embodiments of Applicant's invention mentioned on page 7 of the Specification were the product of polycondensation. Rather, cluster formation was made possible by virtue of the fact that Z-Sp-L- is capable of coordinating to more than one metal center. When a plurality of chelating molecules are reacted with a plurality of metal centers, each chelating molecule may form bonds to more than one metal atom thereby forming a cluster. Despite the fact that this is not a preferred embodiment of Nass' invention, it is still suggested. "A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments" *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989).

The rejections over Furman et al., are hereby withdrawn in view of Applicant's arguments. It is agreed that the aluminozirconates mentioned therein are not equivalent to the chelating moieties presently disclosed.

Art Unit: 1712

This rejection will not be made final because the aforementioned article should have been invoked as a foundation for rejection in the last Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 5, 2005

Marc Zimmer
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AU 1712